

Evaluation of four introduced temperate grass species under grazing at Glen Innes, N.S.W.

G.G. Robinson¹, T.J. May² and B.D. Scarsbrick³

¹ Agricultural Research Station, Glen Innes, N.S.W. 2370.

² N.S.W. Department of Agriculture, P.O. Box 78, Glen Innes, N.S.W. 2370.

³ N.S.W. Department of Agriculture, P.O. Box 53, Orange, N.S.W. 2800.

Increased production, persistence or longer seasonal distribution are sought by plant breeders for pasture plants. However, it is essential to evaluate these attributes in a grazing situation to determine the response in terms of animal production (George and Croft, 1968). Production data from *Phalaris aquatica* cv. Sirosa (Scarsbrick, 1978) and *Holcus lanatus* cv. Massey Basyn (Watkin and Robinson, 1974) indicated a need to evaluate these species in the Glen Innes district. These grasses were compared with *Phalaris aquatica* cv. Commercial and *Festuca arundinaceae* cv. Demeter in a replicated experiment on a Glen Innes district property. Each was sown with white clover (*Trifolium repens* cv. Grasslands Huia) as companion legume.

The pastures were sown June 10, 1974 with superphosphate containing 0.55 g molybdenum per kg at a rate of 125 kg ha⁻¹ and pastures were treated annually with superphosphate at 125 kg ha⁻¹. Each pasture was grazed continuously at stocking rates of 12 and 16 Merino wethers per hectare from December 1, 1975. Pasture available was estimated using an electronic probe every six weeks and sheep were weighed on each occasion.

Initially the amount of pasture available was greatest on the Yorkshire Fog treatments. However, towards the end of the experiment mean pasture available on the commercial phalaris plot was greater than for other grasses ($P < 0.05$). In each year pasture available was greater at the low stocking rate ($F < 0.05$) and differences increased linearly with time. However, this increase in available pasture failed to promote any significant increase in animal liveweight in comparison with the high stocking rate. In contrast to pasture availability data the liveweight of animals on Sirosa was greater than those on Commercial phalaris on September 12, 1978. This effect was particularly evident at the low stocking rate.

During the first two years wool production per head was unaffected by pasture type or stocking rate, but during 1978 wool production was reduced at the high stocking rates while the phalaris pastures promoted higher wool production than was recorded on the other two grasses. The small differences in animal production suggest that the choice of grass species is a relatively unimportant factor in grazing production. The better performance of Sirosa appeared to be related to palatability, a feature which would be important at lower stocking rates.

George, J.M.; Croft, T.J. (1968). Proc. Aust. Soc. Anim. Prod. 7: 99.

Scarsbrick, B.D., (1978). Agric. Gaz. N.S.W. 89(4): 18.

Watkin, B.R.; Robinson, G.S. (1974). Proc. N.Z. Grassld. Ass. 35(2): 278.